CHAPTER I

1.1 PRESENTATION

The Aimpoint MPS3 with the MGM mount is a rugged, passive, red dot sight developed mainly for use in demanding applications on medium or heavy vehicle-mounted weapons under all light conditions. Its simplicity of use, based upon the “One Function Principle” allows the user to concentrate on the target and operate the MPS3 and MGM even with thick winter gloves in the dark. The MPS3 with MGM combines the superior accuracy and ease of use of the well-known Aimpoint sight models with significantly longer battery life and increased ruggedness through reinforced design.

Aimpoint red dot sights are designed for the “two eyes open” method of sighting, which greatly enhances situational awareness and target acquisition speed. These sights also feature unlimited eye-relief and are compatible with all generations of night vision devices. The MPS3 features extremely low power usage, and with the ability to use either alkaline or lithium AA size batteries provides an unequalled battery lifetime.

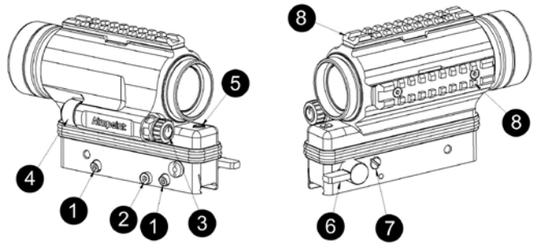
The MGM mount is made for use in MIL STD 1913 Picatinny Rail applications and has integrated windage and elevation adjustments for zeroing of the MPS3 as well as an integrated, 3-step ballistic compensation adjustment.

1.2 SPECIFICATION

OPTICAL SYSTEM	
Operating Principle	Passive Electronic Red Dot Collimator Reflex Sight
Optical Magnification	1 X, unlimited eye relief, no centering needed
Clear Aperture	46 mm
Aiming Dot Size	2 MOA*, (0.6 mRad) nominal
Optical Coating	Anti reflex, NVD compatible**
Dot Brightness	16 settings – 7 NVD and 9 Daylight including 1 Extra Bright
Dot Color	Red (650 nm wavelength)
Optical Signature	No forward optical signature from the dot beyond 10 meters
POWER SOURCE	
Battery Type	One AA size battery, (rechargeable 1.2V), alkaline/lithium 1.5V or lithium 3-3.7V (acceptable voltage 1.2-5 volt)
Battery Life, typical	Over 8 years of continuous (day and night) use at pos 12 of 16 and over 3 years at pos 13 of 16. Typically 500 000 hours at NVD setting. (figures valid at room temperature and for a good quality 1.5V alkaline battery)
PHYSICAL SPECIFICATIONS	
Dimensions (L x W x H)	175 mm x 84 mm x 81 mm (6.9” x 3.3” x 3.2”), sight only 200 mm x 84 mm x 124 mm (7.8” x 3.3” x4.9”), sight with MGM mount
Height of optical axis	77 mm (3.0”) with MGM mount, over top surface of Picatinny Rail
Mass	720 grams (25.4 oz) sight only, 1230 grams (43.4 oz) with MGM mount
Lens Covers	Lens Covers will add 7 mm (0.3”) to the length and 50 grams (2.0 oz) to the weight
Material - Housing	Extruded, high strength aluminum, hard anodized, black to dark gray, non-glare finish
Material - Lens Covers	Rubber, black, non-glare finish
Radioactive Materials	None (Tritium 0%, Thorium 0%, Thorium Fluoride 0%)
Hazardous Materials	None (Mercury 0%, including battery)
Adjustment	Range ±2 m at 100 meters ,±2yds at 100 yds, in windage and elevation, 1 click = 50 mm at 100 meters = 2” at 100 yds
ENVIRONMENTAL SPECIFICATIONS	
Temperature Range, Operating	-45°C to +71°C (-50°F to +160°F)
Thermal Shock	> 7.7°C/s (-45°C to +71°C in 15 seconds)
Humidity	0-100% condensing or non-condensing
Immersion	1 m (3 ft.)
Shock	3 x 400 G 0.7-1.1 ms
Vibration	XYZ: 10-30 Hz: 3 mm, 30-150 Hz: 5.75 G for 30 minutes
Chemical Resistance	Not affected by weapons cleaners, lubricants, oil or insect repellants
MECHANICAL INTERFACE	
MGM mount	Mounts to a MIL-STD 1913 Rail System “Picatinny Rail”

** MOA: Minute Of Angle 1MOA 30 mm at 100 meters 1” at 100 yards*
*** NVD: Night Vision Device*

Location and description of major components and functions



1. Screw (2 pcs) for mounting to Picatinny Rail
2. Recoil stop
3. Switch Knob for Dot Brightness setting
4. Battery Cap
5. Elevation Adjustment Screw
6. Ballistic Compensation Lever Arm
7. Windage Adjustment Screw
8. Picatinny Rail for mounting of accessories

CHAPTER II

OPERATION UNDER NORMAL CONDITIONS

2.1 ASSEMBLY AND PREPARATION FOR USE

WARNING: Ensure the weapon is unloaded and the safety selector is in the ”safe” position before attempting to install, remove or perform maintenance on the sight.

2.1.1 Installing Battery

a) Remove Battery Cap (4) by turning it counter clockwise.
b) Insert a AA-size battery with negative (-) end toward Cap (4).

Caution while replacing battery (not necessary the first time the sight is used) Before installing Battery Cap, inspect that the O-ring is present and not damaged. Failure to do so could result in water leakage into the battery compartment.

c) Install Battery Cap (4) by turning it clockwise until snug. Hand tighten only. Using tools could damage equipment.

d) Verify that red dot is present by turning the Switch Knob (3) clockwise.

2.1.2 Installing Sight on the weapon

The MPS3 with MGM mount is designed for installation on most types of medium or heavy support weapons, which have a MIL-STD 1913 Picatinny Rail.

First, remove the Recoil Stop (2) by screwing it counter clockwise. Then loosen the two Screws (1) for mounting to the Picatinny Rail.

Assemble the MPS3 with MGM mount to the weapon Picatinny Rail by sliding the unit onto the Rail, either from the front or from the rear end. Try to find a suitable position of the Sight unit on the Rail. Then insert the Recoil Stop (2). The Recoil Stop (2) shall fit into one of the grooves of the Rail.

Firmly tighten the two Screws (1) and finally tighten the Recoil Stop (2). The Screws (1) and the Recoil Stop (2) shall be tightened with a hex key, size 5 mm. After firing several rounds, check that the MGM mount is still securely tightened to the weapon’s accessory rail. Retighten the Screws (1) if necessary.

2.2 OPERATING PROCEDURES

2.2.1 Zeroing

The MPS3 with MGM mount is delivered in a centered position. Normally this means that only small adjustments in elevation (5) and windage (7) are necessary, providing that the Picatinny Rail on the weapon is properly aligned.

Zeroing should be done at the shortest distance decided for the Ballistic Compensation Lever Arm (6), e.g. 200 meters (200 yds) if the ballistic compensation is decided to be set for 200 – 800 – 1200 meters (200 – 800 – 1200 yds).
The Elevation Adjustment Screw (5) is located rear on top of the MGM mount, while the Windage Adjustment Screw (7) is located on the right side.

a) Turn the Switch Knob (3) clockwise until the red dot has a sufficient intensity to contrast against the target.
b) Turn the Ballistic Compensation Lever Arm (6) to the “shorter distance” position. The Arm will then be directed horizontally backward (to the gunner). See fig. A.

NOTE: Each click of the adjustment screws corresponds to a 50 mm movement of the point of impact at 100 meters (2” at 100 yds), 100 mm at 200 meters (4” at 200 yds).

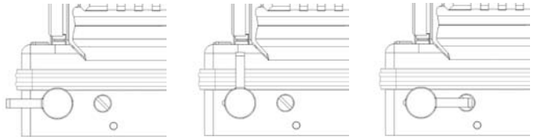
CAUTION: Do not continue to adjust windage and elevation mechanisms if you encounter resistance.

c) Insert adjustment tool (screwdriver or knife) in adjustment screw slot and turn as follows:

- To move the point of impact to the right, turn windage adjustment screw (7) counter clockwise.
- To move the point of impact to the left, turn windage adjustment screw clockwise.
- To move the point of impact up, turn elevation adjustment screw (5) clockwise.
- To move the point of impact down, turn elevation adjustment screw counter clockwise.

d) Confirm zeroing by firing at least three shots at the zeroing target. Repeat above procedure if required.
e) After initial firing, ensure that the MGM mount and MPS3 are secure.
f) Turn Switch Knob (3) to OFF position (counter clockwise).

Fig. A Fig. B Fig. C



2.2.2 Operation under normal conditions

a) Turn the Switch Knob (3) clockwise until the red dot has a sufficient intensity to contrast against the target.
b) Turn the Ballistic Compensation Lever Arm (6) to the position that corresponds to the target distance according to figures A, B or C.

Arm position	Target distance meters (yds)
A	200
B	800
C	1200

(provided zeroing has been done at 200 meters)

CHAPTER III
OPERATION UNDER EXTREME CONDITIONS

a) **Extreme heat** (moist or dry). No special procedures required.
b) **Extreme cold**. Extreme cold might shorten battery life.
c) **Salt air**. No special procedures required.
d) **Sea spray, water, mud and snow**. Ensure that Battery Cap (4) is tight before exposing the MPS3 to sea spray, mud, snow or before immersing the sight in water. Hand-tighten only. After exposure to water, sea spray, mud or snow, wash the entire unit with fresh water only. Clean lenses with lens paper/cloth and wipe the MPS3 dry as soon as possible.
e) **Dust storms and sand storms**. Try to keep front end rear lenses protected with lens covers..
f) **High altitudes**. No special procedures required.

CAUTION: The lenses should only be cleaned with lens paper/cloth and never with fingers. If no lens paper/cloth is available:
- First, clear away debris (sand, grass etc): blow away the dirt.
- To clean lenses: mist up the lenses and dry them with a clean and soft piece of cloth.

CHAPTER IV
TROUBLE SHOOTING PROCEDURES

4.1 RED DOT DOES NOT APPEAR

Discharged battery:	Replace battery
Battery installed incorrectly:	Remove and reinstall battery with (-) toward cap (4).
Battery is not making good contact:	Carefully clean contact surfaces and reinstall battery.
Defective rotary switch:	Notify armourer

4.2 IMPOSSIBLE TO ZERO

Adjustment screw is at its limit:	Check alignment of Picatinny Rail to barrel
Impact point is moving:	Check mount stability

CHAPTER V
MAINTENANCE

a) The MPS3 with MGM mount does not require any frequent or regular maintenance while used under normal conditions. Only the Elevation (5) and Windage (7) Screw threads might need some grease/oil (weapon type) after some time.
b) Under severe weather conditions please refer to chapter III.
c) Warehouse storage: Remove battery and allow lens surfaces to dry completely (if wet).
d) To clean lenses refer to CAUTION in chapter III.

Aimpoint®

Operator and Maintenance Manual for

Aimpoint MPS3
with
MGM mount

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